

REMARKS

Claims 1-5, 8-11, 13-24 and 27-31 are pending in this application. Claims 24 and 28-31 are currently withdrawn. By this Amendment, claims 1 and 24 are amended to further define the presently claimed subject matter. The amendments to claims 1 and 24 are supported at least by original claim 7 and page 9, lines 12-26 of the original specification. Claims 1 and 24 are amended to further overcome the claim objection. No new matter is added by this Amendment.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

I. Claim Objections

A. Claims 1-5, 8-11, 13-23 And 33

Claims 1-5, 8-11, 13-23 and 33* were objected to because the phrase "terminated with isocyanate groups after removal of the terminal isocyanate groups" allegedly does not limit the claims. For the reasons discussed below, Applicants respectfully traverse the claim objection.

* The Office Action incorrectly indicates that claims 1-5, 7-11, 13-23 and 33 were objected. However, claim 7 was canceled in the December 21, 2010 Amendment. Applicants respectfully request appropriate correction in the next Patent Office communication.

Although Applicants respectfully disagree with the Patent Office's allegation, in order to expedite prosecution, Applicants have amended claim 1 to recite that Y_1 is an n-valent moiety derived from a linear or branched polyurethane prepolymer terminated with isocyanate groups by removal of the terminal isocyanate groups from the polyurethane prepolymer. In other words, Y_1 is defined as a residue of a polyurethane prepolymer that was once terminated with isocyanate groups, the isocyanate groups having been eliminated from the polyurethane prepolymer during the formation of polymer **B**.

Withdrawal of the objection is requested.

B. Claims 1-5, 8-11 And 13-23

Claims 1-5, 8-11 and 13-23 were objected to because the term species recited in claim are alleged not "polyphenol."

Applicants have amended claim 1 to remove the term "polyphenol", rendering the above rejection moot.

Withdrawal of the objection is requested.

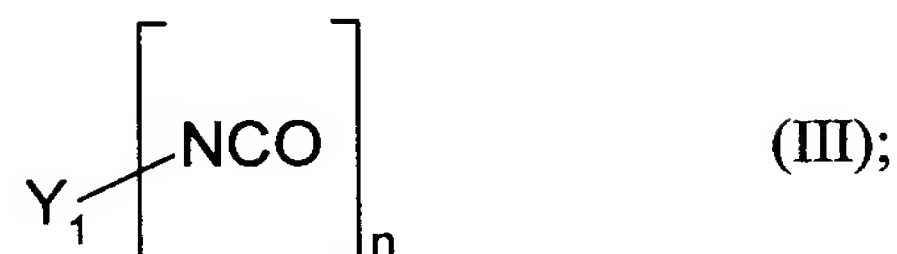
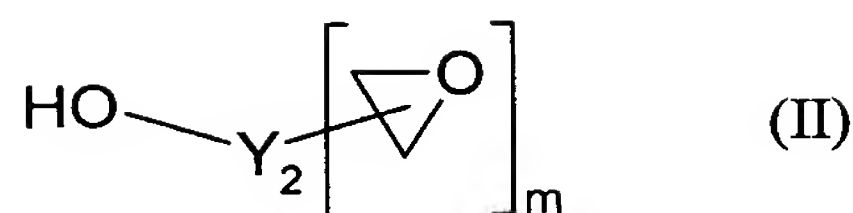
II. Rejections Under 35 U.S.C. §103(a)

A. Lu In View Of Merz

Claims 1-5, 8-11, 13-17 and 19-23 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,740,192 ("Lu") in view of U.S. Patent Application Pub. No. 2002/0007003 ("Merz"). Applicants respectfully traverse this rejection.

For the reasons discussed below, Applicants submit that Lu and Merz would not have rendered obvious claim 1.

Applicants have amended claim 1 to recite the following features: (1) the at least one polymer **B** is obtained from the reaction of a monohydroxyepoxide of the formula (II) and of a linear or branched polyurethane prepolymer terminated with isocyanate groups of the formula (III)



(2) the polyurethane prepolymer of the formula (III) is obtained from the reaction of at least one polyisocyanate, at least one isocyanate-reactive polymer and at least one, optionally substituted, bisphenol or trisphenol selected from the group consisting of 1,4-dihydroxybenzene, 1,3-dihydroxybenzene, 1,2-dihydroxybenzene, 1,3-dihydroxytoluene, 3,5-dihydroxybenzoates, 2,2-bis(4-hydroxyphenyl)propane (bisphenol A), bis(4-hydroxyphenyl)methane (bisphenol F), bis(4-hydroxyphenyl) sulfone (bisphenol S), naphthoresorcinol, dihydroxynaphthalene, dihydroxyanthraquinone, dihydroxybiphenyl, 3,3-bis(p-hydroxyphenyl)phthalides, 5,5-bis(4-hydroxyphenyl)hexahydro-4,7-methanoindane, phenolphthalein, fluorescein, 4,4'-[bis(hydroxyphenyl)-1,3-phenylenebis(1-methylethylidene)] (bisphenol M), 4,4'-[bis-(hydroxyphenyl)-1,4-phenylenebis(1-methylethylidene)] (bisphenol P), o,o-diallylbisphenol A, dicresols prepared by reacting cresols with diisopropylidenebenzene, phloroglucinol, gallic ester, cresol novolacs having an -OH functionality of from 2.0 to 3.5, and isomers thereof.

In other words, the above features of claim 1 clearly indicate that the aromatic moiety (identified as Ar₁ in formula (IV) of polymer **B**) is introduced by one of the bisphenols and trisphenols recited in claim 1. For the reasons discussed below, Lu and Merz, would not have rendered obvious at least features (1)-(2) of claim 1.

Lu describes electroconductive materials comprised of electroconductive adhesive containing epoxide modified polyurethanes. See Lu, Abstract. Lu further describes that the

epoxide modified polyurethane may be formed from the reaction of a polyalkylene oxide modified phenol-formaldehyde resin or an active hydrogen containing compound and an isocyanate. See Lu, column 9, lines 32-38. As acknowledged by the Patent Office, phenol-formaldehyde prepolymers are novolacs and thus the phenol-formaldehyde of Lu is a novolac resin.

However, Lu does not describe that the polyalkylene oxide modified phenol-formaldehyde resin of Lu is obtained from the reaction of at least one polyisocyanate, at least one isocyanate-reactive polymer and at least one, optionally substituted, bisphenol or trisphenol from the list recited in claim 1. Because Lu does not describe the bisphenols or trisphenols recited in claim 1, the polyalkylene oxide modified phenol-formaldehyde resin of Lu is entirely different from the polyurethane prepolymer terminated with isocyanate groups of the formula (III).

Merz does not remedy the deficiencies of Lu. Merz was introduced as allegedly describing a thixotropic agent. However, Merz does not describe the polyurethane prepolymer terminated with isocyanate groups of formula (III), which is used along with the monohydroxyepoxide of the formula (II) to form polymer **B** of claim 1.

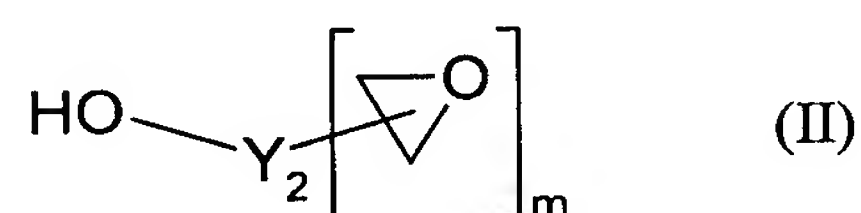
As such, Lu alone or in combination with Merz would not have provided one of ordinary skill in the art with any reason or rationale to have produced polymer **B** of claim 1.

Withdrawal of the rejection is requested.

B. Lu In View Of Merz And In Further View Of Kaji

Claim 18 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Lu in view of Merz, and in further view of WO 02/48235 ("Kaji"). The Patent Office relied upon U.S. Patent No. 6,903,180 as an English-language equivalent of Kaji. Applicants respectfully traverse this rejection.

For the above reasons, Lu and Merz would not have rendered the present claims obvious. Kaji does not remedy the deficiencies of these references. Kaji was introduced as allegedly describing dicyandiamide as a curing agent. However, Kaji does not describe that (1) the at least one polymer **B** is obtained from the reaction of a monohydroxyepoxide of the formula (II) and of a linear or branched polyurethane prepolymer terminated with isocyanate groups of the formula (III)



(2) the polyurethane prepolymer of the formula (III) is obtained from the reaction of at least one polyisocyanate, at least one isocyanate-reactive polymer and at least one, optionally substituted, bisphenol or trisphenol selected from the group consisting of 1,4-dihydroxybenzene, 1,3-dihydroxybenzene, 1,2-dihydroxybenzene, 1,3-dihydroxytoluene, 3,5-dihydroxybenzoates, 2,2-bis(4-hydroxyphenyl)propane (bisphenol A), bis(4-hydroxyphenyl)methane (bisphenol F), bis(4-hydroxyphenyl) sulfone (bisphenol S), naphthoresorcinol, dihydroxynaphthalene, dihydroxyanthraquinone, dihydroxybiphenyl, 3,3-bis(p-hydroxyphenyl)phthalides, 5,5-bis(4-hydroxyphenyl)hexahydro-4,7-methanoindane, phenolphthalein, fluorescein, 4,4'-[bis(hydroxyphenyl)-1,3-phenylenebis(1-methylethylidene)] (bisphenol M), 4,4'-[bis-(hydroxyphenyl)-1,4-phenylenebis(1-methylethylidene)] (bisphenol P), o,o-diallylbisphenol A, dicresols prepared by reacting cresols with diisopropylidenebenzene, phloroglucinol, gallic ester, cresol novolacs having an -OH functionality of from 2.0 to 3.5, and isomers thereof, as recited in claim 1.

As such, Lu, Merz and Kaji, alone or in combination, would not have provided one of ordinary skill in the art with any reason or rationale to have produced polymer **B** in claim 1.

Withdrawal of the rejection is requested.

C. Conclusion

In view of the foregoing amendments and arguments, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejections.

III. Rejoinder

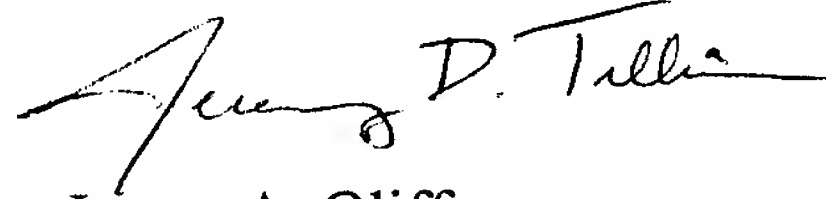
In view of the foregoing amendments and arguments, Applicants respectfully request that upon allowance of claims 1-5, 8-11, 13-23 and 27, claims 24 and 28-31 be rejoined with the application and similarly allowed.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-5, 8-11, 13-24 and 27-31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: June 8, 2011

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